2. An apparatus of claim 1, wherein the ports to which protective relays or meters are connected are identified as Intelligent Electric Device (IED) ports, and wherein the ports to which a terminal or modem device are connected are identified as master ports, and wherein the apparatus includes at least one master port and at least six IED ports.

3. An apparatus of claim 2, wherein the apparatus includes a port to which a printer may be connected for printing out data obtained from the IED ports.

4. An apparatus of claim 1, including means for automatically configuring a port for selected devices.

5. An apparatus of claim 1, wherein the communication parameters include baud rate, number of data bits, stop bit and parity bit.

6. An apparatus of claim 1, wherein the receiver-transmitter means comprises a plurality of quad universal asynchronous receiver-transmitter means, each of which services a plurality of ports.

7. An apparatus of claim 1, wherein the apparatus is responsive to control commands, including user-defined commands to carry out specific functions associated with the control commands.

8. An apparatus of 7, including means for automatically requesting of and obtaining data from a particular port device in response to a command setting for said particular port.

9. An apparatus of claim 1, including a plurality of contact input means for accepting signals from protective relays and a plurality of contact output means for providing output signals.

10. An apparatus of claim 9, wherein at least one of those output signals is an alarm signal.

11. An apparatus of claim 1, including means for providing time information for synchronizing time clocks for each of the devices connected to said ports.

12. An apparatus of 11, wherein a source of the time information is an externally generated IRIG-B time code signal.

13. An apparatus of 11, including an internal clock for generating the time information.

14. An apparatus of claim 1, including means for making the apparatus transparent to received data from a port.

15. An apparatus of claim 14, wherein the apparatus can be transparent to data from more than one port simultaneously.

16. An apparatus of claim 1, including an internal modem to which an external telephone line may be connected for transmission of selected data to a remote location.

17. An apparatus of claim 1, wherein the apparatus includes buffer storage associated with each port.

18. An apparatus of claim 1, including means for temporarily storing data which has been received from the individual ports and parsed.

19. An apparatus of claim 1, including a long-term non-volatile memory for storage of selected data.

20. An apparatus of claim 1, including buffer means at each port for separate storage of binary format and ASCII format data.

21. An apparatus of claim 1, including means for processing and storing fast meter binary data from IED devices.

22. An apparatus of claim 1, wherein the data processing means includes means for parsing received data in accordance with selected rules.

23. An apparatus of claim 22, wherein the parsing rules are pre-established.

24. An apparatus of claim 22, wherein the parsing rules are defined by an operator.

ABSTRACT

The communications processor includes an electronic network system which includes a total of 17 individual ports, four quad universal asynchronous receiver/transmitter devices, each of which serves four separate ports, and a microprocessor which processes and controls the flow of data under the control of stored control programs, command settings and command logic. Connected to a plurality of those ports referred to as IED ports are intelligent electronic devices IEDS, such as protective relays or meters, while connected to other ports, referred to as master ports, are remote terminal units or a local computer or terminal or a modem which can be connected to an external telephone line. The apparatus includes both buffer and long-term storage for development of a database, as well as an IRIG-B capability for synchronization of the time clocks of the connected devices.